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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,943	12/06/2000	Hideo Yahagi	108066	6925
7590 09/21/2004			EXAMINER	
Oliff & Berridge PLC P. O. Box 19928 Alexandria, VA 22320			TRAN, HIEN THI	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/729,943	<b>Applicant(s)</b> YAHAGI, HIDEO	
	<b>Examiner</b> Hien Tran	<b>Art Unit</b> 1764	

S.C.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 6-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:

On page 2, line 7 it is unclear as to what is intended by "purged".

On page 17, line 23 "not" should be changed to --no--.

Appropriate correction is required.

### *Claim Objections*

2. Claims 1, 2 are objected to because of the following informalities:

In claim 1, line 6 "said emission control system further" should be changed to --said catalyst". See claim 2 likewise.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 7, 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Foster (5,857,140).

With respect to claims 1, 2, Foster discloses an exhaust emission control system comprising:

an internal combustion engine;

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an exhaust gas purifying catalyst provided in an exhaust passageway of said internal combustion engine;

a box body formed with an exhaust gas inlet and an outlet;

a catalyst support incorporated into said box body; and

a catalyst substance supported on said catalyst support; wherein a part of said catalyst support is a low resistance area or notch portion formed so that a gas flow resistance is lower than in other areas and disposed in such a position that a flow velocity of the exhaust gas flowing to said catalyst support is high (see, for example, col. 2, lines 38-45; col. 4, lines 8-61; col. 8, lines 20-30).

Foster discloses that the notched portion is formed in an exhaust gas inflow sided end and in an exhaust gas outflow sided end.

With respect to claim 7, Foster discloses provision of a plurality of notched portions (Fig. 18).

With respect to claims 9-10, Foster discloses that the notched portion includes a guide passageway inclined or conical shape (Figs. 8,17).

Instant claims 1-2, 7, 9-10 structurally read on the apparatus of Foster.

5. Claims 1-2, 7, 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 07-232082.

With respect to claim 1, JP 07-232082 discloses an exhaust emission control system comprising:

an internal combustion engine;

an exhaust gas purifying catalyst provided in an exhaust passageway of said internal combustion engine;

a box body formed with an exhaust gas inlet and an outlet;

a catalyst support incorporated into said box body; and

a catalyst substance supported on said catalyst support; wherein a part of said catalyst support is a low resistance area or notch portion formed so that a gas flow resistance is lower than in other areas and disposed in such a position that a flow velocity of the exhaust gas flowing to said catalyst support is high (abstract).

Instant claim 1 structurally reads on the apparatus of JP 07-232082.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. The art area applicable to the instant invention is that of catalytic converter.

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One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

9. Claims 4, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster (5,857,140).

With respect to claims 4, 6, selecting an appropriate amount of catalyst loading for each portion of the substrate is within the purview of one having ordinary skill in the art during routine experimentation and optimization of the system, absence showing any unexpected results thereof.

With respect to claim 8, since the shape of the end face of the catalyst substrate (shape of the notched portion) is not considered to confer patentability to the claim. It would have been an obvious matter of design choice to select an appropriate shape for the end face of the catalyst substrate/shape of the notched portion, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art, absence showing any unexpected results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

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10. Claims 2, 4, 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-232082 in view of Foster (5,857,140).

The same comments regarding to Foster apply.

It would have been obvious to one having ordinary skill in the art to select notched portions (shape, number, location, etc.) as taught by Foster in the apparatus of JP 07-232082, since such a modification would have involved a mere change in the shape of a component or rearrange the notched portion. A change in shape is generally recognized as being within the level of ordinary skill in the art, absence showing any unexpected results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Note that it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

#### ***Response to Arguments***

11. Applicant's arguments filed 6/18/04 have been fully considered but they are not persuasive.

Applicant argues that neither Foster nor the JP reference discloses the system of the instant claims. Such contention is not persuasive as Foster or the JP reference discloses all of the structural elements set forth in the instant claims as set forth above.

Applicant argues that depressions in Foster are for different purpose from that of the notch portion of the instant claims. Such contention is not persuasive as the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Applicant argues that the JP reference only teaches the notch portions at an upstream side of the end surface of the carrier 20 and does not teach a low resistance area. Such contention is not persuasive as Foster is relied upon for teaching the notch portion at a downstream side thereof. Since the carrier 20 of JP reference has a cutout portion at the upstream side of the carrier, the downstream remaining portion of the carrier is considered a low resistance area thereof.

Applicant argues that the JP reference requires that the gas flows through the first carrier. That may be so. However, the language of the instant claims does not preclude such gas flow.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, the JP reference teaches all of the structural elements set forth in the instant claims, but is silent as to whether the notch portions may be disposed at the downstream side of the carrier. Foster discloses the conventionality of providing the notch portions at the upstream and downstream side thereof. It would have been obvious to one having ordinary skill in the art to select appropriate notched portions (shape, number, location, etc.) as taught by Foster in the apparatus of JP 07-232082, since such a modification would have involved a mere change in the shape of a component or rearrange the notched portions. A change in shape is generally recognized as being within the level of ordinary skill in the art, absence showing any unexpected



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results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Note that it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gary, Abe et al, and Sigling are cited for showing state of the art.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HT  
September 17, 2004

  
**Hien Tran**  
**Primary Examiner**  
**Art Unit 1764**